AMENDMENTS TO THE CLAIMS

Please **AMEND** claims 1-12 as shown below.

Please **ADD** claims 13-18 as shown below.

The following is a complete list of all claims in this application.

What is claimed is:

1. (Amended) An activated ~~semi-crystalline, largely isotropic, coal-based~~ carbon foam, comprising:

said activated carbon foam produced from particulate coal exhibiting a free swell index ~~of between~~ ranging from about 3.5 ~~and~~ to about 5.0 ~~and of a small diameter~~, wherein said activated carbon foam ~~having~~ has a density ranging from ~~of between about~~ 0.1 ~~and~~ to about 0.8 g/cm^3; and

wherein said activated foam has an overall surface area of ~~between~~ ranging from about 10 m^2/g ~~and~~ to about 25 m^2/g.

2. (Amended) The activated ~~coal-based~~ carbon foam of claim 1, wherein ~~having an~~ said overall surface area ~~of~~ ranging from ~~between~~ about 15 m^2/g ~~and~~ to about 20 m^2/g.

3. (Amended) The activated ~~coal-based~~ carbon foam of claim 1, wherein said particulate coal exhibits a free swell index ~~of between~~ ranging from about 3.75 ~~and~~ to about 4.5.

4. (Amended) The activated ~~coal-based~~ carbon foam of claim 3, wherein said ~~having an~~ overall surface area ~~of between~~ ranging from about 15 m^2/g ~~and~~ to about 20 m^2/g.

5. (Amended) The activated ~~coal-based~~ carbon foam of claim 1, wherein said ~~coal-based~~ activated carbon foam ~~has~~ is ~~been~~ calcined.

6. (Amended) The activated ~~coal-based~~ carbon foam of claim 1, wherein said ~~coal-based~~ activated carbon foam ~~has been~~ is graphitized.

7. (Amended) A monolithic activated carbon filter element, comprising:

an activated ~~semi-crystalline, largely isotropic, coal-based~~ carbon foam produced from particulate coal exhibiting a free swell index ~~of between~~ ranging from about 3.5 ~~and~~ to about 5.0 ~~and of a small diameter~~, wherein said activated carbon foam has ~~having~~ a density ~~of between~~ ranging from about 0.1 ~~and~~ to about 0.8 g/cm^3 and an overall surface area ~~of between~~ ranging from about 10 m^2/g ~~and~~ to about 25 m^2/g.

8. (Amended) The monolithic activated carbon filter element of claim 7, wherein said activated carbon form ~~having~~ had an overall surface area ~~of between~~ ranging from about 15 m^2/g ~~and~~ to about 20 m^2/g.

9. (Amended) The monolithic activated carbon filter element of claim 7, wherein said particulate coal exhibits a free swell index ~~of between~~ ranging from about 3.75 ~~and~~ to about 4.5.

10. (Amended) The monolithic activated carbon filter element of claim 9, wherein said carbon foam ~~having~~ has an overall surface area ~~of between~~ ranging from about 15 m^2/g ~~and~~ to about 20 m^2/g.

11. (Amended) The monolithic activated carbon filter element of claim 7, wherein said ~~coal-based carbon~~ foam ~~has been~~ is calcined.

12. (Amended) The monolithic activated carbon filter element of claim 7, wherein said ~~coal-based~~ carbon foam ~~has been~~ is graphitized.

13. (New) A method of forming activated carbon foam, comprising:

heating swellable particulate coal in a mold to a first temperature ranging from about 300° C to about 700° C under a non-oxidizing atmosphere at a pressure ranging from about 25 psi to about 500 psi;

holding at the first temperature ranging from about 10 min. to about 12 hours;

controllably cooling heated swellable particulate after holding at said first temperature to a second temperature below about 100° C to form a carbon foam having a first overall surface area;

activating carbon foam by flowing an activation agent into the mold at a second temperature for increasing the first overall surface area ranging from about 10 m^2/g to about 25 m^2/g.

14. (New) The method of forming activated carbon foam of claim 13, further comprising:

carbonizing the carbon foam having a first overall surface area to form a carbonized foam by heating to a second temperature ranging from about 600° C to about 1600° C in an inert atmosphere and holding at the second temperature for a period of time ranging from about 1 hour to about 3 hours.

15. (New) The method of forming activated carbon foam of claim 14, further comprising:

graphitizing said carbonized foam by heating said carbonized ofam to a fourth temperature ranging from about 170 ° C to about 3000° C in an inert atmosphere and holding at the third temperature for a period of time less than about 1 hour.

16. (New) The method of forming activated carbon foam of claim 14, wherein said swellable particulate coal exhibits a free swell index ranging from about 3.75 to about 4.5.

17. (New) The method of forming activated carbon foam of claim 14, wherein said activation agent includes carbon dioxide (CO_2).

18. (New) The method of forming activated carbon foam of claim 14, wherein said activation agent includes ozone (O_3).